CLIPPEDIMAGE= JP409222809A

PAT-NO: JP409222809A

DOCUMENT-IDENTIFIER: JP 09222809 A

TITLE: CONDUCTIVE BELT

PUBN-DATE: August 26, 1997

INVENTOR-INFORMATION:
NAME
UMEZAWA, IKUKO
SEKIDO, FUMIO

ASSIGNEE-INFORMATION:

NAME	COUNTRY
SUMITOMO RUBBER IND LTD	N/A

APPL-NO: JP08329791

APPL-DATE: December 10, 1996

INT-CL (IPC): **G03G015/16**;B29D029/00 ;B65H005/02 ;H01B001/20

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a conductive belt having a limited variation
in resisistame over time and stable even to an environmental change by
adjusting volume specific resistance in a specific value range by blending a
conductive filler, and using rubber to satisfy a specific formula.

SOLUTION: A conductive **belt** is composed of rubber whose volume specific
resistance is adjusted to 10<SP>6</SP> to
10<SP>13</SP>Ω.cm by blending a
conductive filler, and this rubber satisfies
(0.5≤logR<SB>0</SB>-logR≤3).
Here, R represents resistance of rubber when a conductive filler is added, and
R<SB>0</SB> represents resistance of rubber when the conductive filler is not

added. That is, while setting contribution to addition of volume specific
resistance by electron conduction on the basis of addition of the conductive
filler in a range of 10<SP>0.5</SP> to
10<SP>3</SP>Ω.cm, volume specific
resistance of the rubber is set to 10<SP>6</SP> to
10<SP>13</SP>Ω.cm by
simultaneous use of electron conduction and **ion conduction**.
For example,
carbon black on which an iodine adsorbing quantity is 20 to 90mg/g is
preferable as the conductive filler.

CLIPPEDIMAGE= JP411231662A

PAT-NO: JP411231662A

DOCUMENT-IDENTIFIER: JP 11231662 A

TITLE: CONDUCTIVE BELT

PUBN-DATE: August 27, 1999

INVENTOR-INFORMATION:

NAME	COUNTRY
UEISHI, KENTARO	N/A

ASSIGNEE-INFORMATION:

NAME	COUNTRY
FUJI XEROX CO LTD	N/A

APPL-NO: JP10031650

APPL-DATE: February 13, 1998

INT-CL (IPC): **G03G015/16**

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a conductive belt which causes little permanent elongation even in a long-term use and which has excellent uniformity in the electric resistance and high strength with little changes with time.

SOLUTION: This conductive **belt** to be used for the mechanism of an electrophotographic copying device or a laser printer has a conductive layer which consists of an elastomer having urethane bonds and urea bonds in the molecule with addition of conductive carbon black and an **ionic conductive** material in the elastomer. The average ratio of urethane bonds to urea bonds in the molecule of the elastomer is preferably (5:95) to (95:5). The conductive **belt** is formed by a centrifugal forming method.

It is preferable
that a flocculated layer of the conductive carbon black is
preferably formed
near the surface of the conductive layer.

DERWENT-ACC-NO: 2001-074568
DERWENT-WEEK: 200121

TITLE: Seamless transfer belt for electrophotographic printer, is formed by extrusion molding using raw material containing specific polyphenylene sulfide resin
INVENTOR-NAME:
PRIORITY-DATA: 1999JP-0091913 (March 31, 1999)
PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2000284611 A	October 13, 2000	N/A	014	G03G 015/16

INT-C (IPC): C08K007/02; C08L027/12 ; C08L081/02 ; C08L101/04 ; G03G015/16
ABSTRACTED-PUB-NO: **JP2000284611A**
BASIC-ABSTRACT: NOVELTY - The seamless transfer belt of desired geometry is manufactured by extrusion molding using circular dies. Raw material used for manufacturing contains polyphenylene sulfide resin containing fluorine. The belt electrostatically transfers a toner image formed on one image carrier to other image carrier.

DETAILED DESCRIPTION - The belt has a thickness of 45-300 mu m, volume resistivity of 100-1014 Omega /cm and surface resistance of 100-1017 Omega /cm. The maximum volume resistivity along peripheral direction of belt is less than 100 times of its minimum value and maximum surface resistance along peripheral direction is less than 100 times of minimum value. The maximum volume resistivity along longitudinal direction of belt is less than 100 times of minimum value and maximum surface resistance along longitudinal direction is

less than 100 times of minimum value, water absorptivity is 1.9% or less. The
belt contains resistance control agent by 40 wt% or less. The control agent
contains 0.05-10 wt% of **ion** conductivity resistance control agent, 3-30 wt% of
electronic conductivity resistance control agent.
INDEPENDENT CLAIMS are also
included for the following: (i) Manufacturing method of transfer section
material involves extrusion molding of raw material by maintaining extrusion
molding ratios in the range of 0.5-3.0 or 1.05-3.0 and air is blown after
extrusion (ii) Image forming device has cylindrical extruder for molding
desired geometrical shape with extrusion molding ratio of 0.5-3.0 or 1.05-3.0.

USE - For laser printer, copier.

ADVANTAGE - Since polyphenylene sulfide resin containing fluorine is used as
raw material for extrusion of transfer belt, changes in properties of belt even
after repeated usage is prevented and obtains high transfer efficiency without
causing damage or influencing organic photoreceptor.

DESCRIPTION OF DRAWING(S) - The figure shows the model diagram of transfer
belt.

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Record Patent Number - NRPN:

JP2000284611A

Patent Number of Local Application - PFPA:

JP2000284611A

Abstracted Patent Number - ABPN:

JP2000284611A

Basic Abstract Text - ABTX:

DETAILED DESCRIPTION - The belt has a thickness of 45-300 mu m, volume resistivity of 100-1014 Omega /cm and surface resistance of 100-1017 Omega /cm. The maximum volume resistivity along peripheral direction of belt is less than 100 times of its minimum value and maximum surface resistance along peripheral direction is less than 100 times of minimum value. The maximum volume resistivity along longitudinal direction of belt is less than 100 times of minimum value and maximum surface resistance along longitudinal direction is less than 100 times of minimum value, water absorptivity is 1.9% or less. The belt contains resistance control agent by 40 wt% or less. The control agent contains 0.05-10 wt% of **ion** conductivity resistance control agent, 3-30 wt% of electronic conductivity resistance control agent. INDEPENDENT CLAIMS are also included for the following: (i) Manufacturing method of transfer section material involves extrusion molding of raw material by maintaining extrusion molding ratios in the range of 0.5-3.0 or 1.05-3.0 and air is blown after extrusion (ii) Image forming device has cylindrical extruder for molding desired geometrical shape with extrusion molding ratio of 0.5-3.0 or 1.05-3.0.